

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/511,875
Source: pat
Date Processed by STIC: 1-30-06

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 01/30/2006

PATENT APPLICATION: US/10/511,875

TIME: 14:58:06

Input Set : E:\56446-20042.01 - Seqlist (Client).txt

Output Set: N:\CRF4\01302006\J511875.raw

```

4 <110> APPLICANT: Gramatikova, Svetlana
5   Hazlewood, Geoff
7 <120> TITLE OF INVENTION: PHOSPHOLIPASES, NUCLEIC ACIDS ENCODING THEM
8   AND METHODS FOR MAKING AND USING THEM
10 <130> FILE REFERENCE: 564462004201
12 <140> CURRENT APPLICATION NUMBER: 10/511,875
C--> 13 <141> CURRENT FILING DATE: 2004-10-19
15 <150> PRIOR APPLICATION NUMBER: PCT/US03/12556
16 <151> PRIOR FILING DATE: 2003-04-21
18 <150> PRIOR APPLICATION NUMBER: 60/374,313
19 <151> PRIOR FILING DATE: 2002-04-19
21 <160> NUMBER OF SEQ ID NOS: 106
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 849
27 <212> TYPE: DNA
28 <213> ORGANISM: Unknown
30 <220> FEATURE:
31 <223> OTHER INFORMATION: Obtained from an environmental sample.
33 <400> SEQUENCE: 1
34 atgaaaaaga aagtattagc actagcagct atggttgctt tagctgcgcc agttcaaagt      60
35 gtagtatttg cacaacaaa taatagtga agtcctgcac cgattttaag atggtcagct      120
36 gaggataagc ataatgagg gattaactct catttggtga ttgtaaatcg tgcaattgac      180
37 atcatgtctc gtaatacaac gattgtgaat ccgaatgaaa ctgcattatt aatgagtg      240
38 cgtgctgatt tagaaaatgg tatttattct gctgattacg agaatcctta ttatgataat      300
39 agtacatatg cttctcactt ttatgatccg gatactggaa caacatatat tccttttgcg      360
40 aaacatgcaa aagaaacagg cgcaaaatat ttaaccttg ctggtcaagc ataccaaaat      420
41 caagatatgc agcaagcatt cttctactta ggattatcgc ttcattattt aggagatgtg      480
42 aatcagccaa tgcatgcagc aaactttacg aatctttctt atccaatggg tttccattct      540
43 aaatacgaaa attttggtga tacaataaaa aataactata ttgtttcaga tagcaatgga      600
44 tattggaatt ggaaaggagc aaaccagaa gattggattg aaggagcagc ggtagcagct      660
45 aaacaagatt atcctggcgt tgtgaacgat acgacaaaag attggtttgt aaaagcagcc      720
46 gtatctcaag aatatgcaga taaatggcgt gcggaagtaa caccggtgac aggaaagcgt      780
47 ttaatggaag cgcagcgcgt tacagctggt tatattcatt tgtggtttga tacgtatgta      840
48 aatcgctaa
50 <210> SEQ ID NO: 2
51 <211> LENGTH: 282
52 <212> TYPE: PRT
53 <213> ORGANISM: Unknown
55 <220> FEATURE:
56 <223> OTHER INFORMATION: Obtained from an environmental sample.
W--> 58 <221> NAME/KEY: SIGNAL
59 <222> LOCATION: (1)...(24)

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W--> 61 <400> 2

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62 Met Lys Lys Lys Val Leu Ala Leu Ala Ala Met Val Ala Leu Ala Ala
63 1 5 10 15
64 Pro Val Gln Ser Val Val Phe Ala Gln Thr Asn Asn Ser Glu Ser Pro
65 20 25 30
66 Ala Pro Ile Leu Arg Trp Ser Ala Glu Asp Lys His Asn Glu Gly Ile
67 35 40 45
68 Asn Ser His Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Arg
69 50 55 60
70 Asn Thr Thr Ile Val Asn Pro Asn Glu Thr Ala Leu Leu Asn Glu Trp
71 65 70 75 80
72 Arg Ala Asp Leu Glu Asn Gly Ile Tyr Ser Ala Asp Tyr Glu Asn Pro
73 85 90 95
74 Tyr Tyr Asp Asn Ser Thr Tyr Ala Ser His Phe Tyr Asp Pro Asp Thr
75 100 105 110
76 Gly Thr Thr Tyr Ile Pro Phe Ala Lys His Ala Lys Glu Thr Gly Ala
77 115 120 125
78 Lys Tyr Phe Asn Leu Ala Gly Gln Ala Tyr Gln Asn Gln Asp Met Gln
79 130 135 140
80 Gln Ala Phe Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val
81 145 150 155 160
82 Asn Gln Pro Met His Ala Ala Asn Phe Thr Asn Leu Ser Tyr Pro Met
83 165 170 175
84 Gly Phe His Ser Lys Tyr Glu Asn Phe Val Asp Thr Ile Lys Asn Asn
85 180 185 190
86 Tyr Ile Val Ser Asp Ser Asn Gly Tyr Trp Asn Trp Lys Gly Ala Asn
87 195 200 205
88 Pro Glu Asp Trp Ile Glu Gly Ala Ala Val Ala Ala Lys Gln Asp Tyr
89 210 215 220
90 Pro Gly Val Val Asn Asp Thr Thr Lys Asp Trp Phe Val Lys Ala Ala
91 225 230 235 240
92 Val Ser Gln Glu Tyr Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Val
93 245 250 255
94 Thr Gly Lys Arg Leu Met Glu Ala Gln Arg Val Thr Ala Gly Tyr Ile
95 260 265 270
96 His Leu Trp Phe Asp Thr Tyr Val Asn Arg
97 275 280

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99 <210> SEQ ID NO: 3

100 <211> LENGTH: 852

101 <212> TYPE: DNA

102 <213> ORGANISM: Unknown

104 <220> FEATURE:

105 <223> OTHER INFORMATION: Obtained from an environmental sample.

107 <400> SEQUENCE: 3

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108 atgaaaagaa aaatttttagc tatagcttcc gtaattgctt taacagctcc tatccaaagt 60
109 gtggcgtttg cgcataaaaa tggtcaccaa gatccaccaa ttgctctaaa gtggctcagca 120
110 gaatctatac ataatgaagg agtaagttct catttatgga ttgtaaacag agccattgat 180
111 attatgtccc aaaatacgac tgttggaag caaaatgaga cagctctatt aaatgaatgg 240
112 cgtacggatc tagagaaagg catttactct gcggattatg aaaaccata ctatgataat 300

```

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```

113 tccacattcg cttcacactt ctatgatcct gattcaggaa aaacgtatat tccatttgct 360
114 aaacaagcaa agcaaacagg agcgaaatat tttaaattag ctggtgaagc ttatcaaaat 420
115 aaagatctga aaaacgcatt cttttattta ggattatcac ttcactattt aggggatgct 480
116 aaccaaccaa tgcattgcagc aaactttact aatatttcgc atccatttgg cttccactca 540
117 aaatatgaaa atttcggtga tacagtgaaa gacaattata gagtaacgga tggaaatggc 600
118 tattggaatt ggcaaagtgc aaatccagaa gagtgggttc atgcatcagc atcagcagca 660
119 aaagctgatt ttccatcaat tgtaaatgat aagacgaaaa attggttcct aaaagcagct 720
120 gtatcacaaag actctgctga taaatggcgt gcagaagtaa caccgataac aggaaaacgt 780
121 ttaatggaag cgcagcgtgt tacagctgga tatatccatt tatggtttga tacgtacgtg 840
122 aataacaaat aa 852

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124 <210> SEQ ID NO: 4

125 <211> LENGTH: 283

126 <212> TYPE: PRT

127 <213> ORGANISM: Unknown

129 <220> FEATURE:

130 <223> OTHER INFORMATION: Obtained from an environmental sample.

W--> 132 <221> NAME/KEY: SIGNAL

133 <222> LOCATION: (1)...(24)

W--> 135 <400> 4

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136 Met Lys Arg Lys Ile Leu Ala Ile Ala Ser Val Ile Ala Leu Thr Ala
137 1 5 10 15
138 Pro Ile Gln Ser Val Ala Phe Ala His Glu Asn Gly His Gln Asp Pro
139 20 25 30
140 Pro Ile Ala Leu Lys Trp Ser Ala Glu Ser Ile His Asn Glu Gly Val
141 35 40 45
142 Ser Ser His Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Gln
143 50 55 60
144 Asn Thr Thr Val Val Lys Gln Asn Glu Thr Ala Leu Leu Asn Glu Trp
145 65 70 75 80
146 Arg Thr Asp Leu Glu Lys Gly Ile Tyr Ser Ala Asp Tyr Glu Asn Pro
147 85 90 95
148 Tyr Tyr Asp Asn Ser Thr Phe Ala Ser His Phe Tyr Asp Pro Asp Ser
149 100 105 110
150 Gly Lys Thr Tyr Ile Pro Phe Ala Lys Gln Ala Lys Gln Thr Gly Ala
151 115 120 125
152 Lys Tyr Phe Lys Leu Ala Gly Glu Ala Tyr Gln Asn Lys Asp Leu Lys
153 130 135 140
154 Asn Ala Phe Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val
155 145 150 155 160
156 Asn Gln Pro Met His Ala Ala Asn Phe Thr Asn Ile Ser His Pro Phe
157 165 170 175
158 Gly Phe His Ser Lys Tyr Glu Asn Phe Val Asp Thr Val Lys Asp Asn
159 180 185 190
160 Tyr Arg Val Thr Asp Gly Asn Gly Tyr Trp Asn Trp Gln Ser Ala Asn
161 195 200 205
162 Pro Glu Glu Trp Val His Ala Ser Ala Ser Ala Ala Lys Ala Asp Phe
163 210 215 220
164 Pro Ser Ile Val Asn Asp Lys Thr Lys Asn Trp Phe Leu Lys Ala Ala
165 225 230 235 240

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166 Val Ser Gln Asp Ser Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Ile
167                               245                               250                               255
168 Thr Gly Lys Arg Leu Met Glu Ala Gln Arg Val Thr Ala Gly Tyr Ile
169                               260                               265                               270
170 His Leu Trp Phe Asp Thr Tyr Val Asn Asn Lys
171                               275                               280
173 <210> SEQ ID NO: 5
174 <211> LENGTH: 843
175 <212> TYPE: DNA
176 <213> ORGANISM: Unknown
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Obtained from an environmental sample.
181 <400> SEQUENCE: 5
182 atgaaaagaa aaatttttagc tatagcttct gtaattgctt taacagctcc tattcaaagt      60
183 gtggcggttg cgcataaatc tgatgggcct attgctttta gatggtcagc ggaatctgta      120
184 cataatgaag gagtaagttc tcatttatgg attgtaaaca gagcaattga tattatgtcc      180
185 caaaatacga ctgtgggtgaa gcaaaatgag acagctctat taaatgaatg gcgtacgaat      240
186 ttggaggaag gtattttattc tgcagattat aaaaacccat actatgataa ttccacattc      300
187 gcttcacact tctatgatcc tgattcagaa aaaacgtata ttccatttgc taaacaagca      360
188 aagcaaacgg gagcaaaagta ttttaaatta gctgggtgaag cttatcaaaa taaagatctg      420
189 aaaaatgcat tcttttatct aggattatca cttcattatt taggggatgt caatcaacca      480
190 atgcatgcag caaactttac taacatttcg catccatttg gcttccactc aaaatatgaa      540
191 aacttcggtg atacagtgaag agacaattat agagtaacag atggagatgg ctattggaat      600
192 tggaaaagtg caaatccaga agagtgggtt catgcatcag catcagcagc aaaagctgat      660
193 ttcccatcaa ttgttaatga taatacgaaa agttgggtcc taaaagcagc ggtatcacaa      720
194 gactctgctg acaaatggcg tgctgaagta acaccggtaa caggaaaacg tttaatggaa      780
195 gcacagcgta ttacagctgg atatattcat ttatgggttg atacgtacgt gaataacaaa      840
196 taa                                                                                               843
198 <210> SEQ ID NO: 6
199 <211> LENGTH: 280
200 <212> TYPE: PRT
201 <213> ORGANISM: Unknown
203 <220> FEATURE:
204 <223> OTHER INFORMATION: Obtained from an environmental sample.
W--> 206 <221> NAME/KEY: SIGNAL
207 <222> LOCATION: (1)...(24)
W--> 209 <400> 6
210 Met Lys Arg Lys Ile Leu Ala Ile Ala Ser Val Ile Ala Leu Thr Ala
211 1                               5                               10                               15
212 Pro Ile Gln Ser Val Ala Phe Ala His Glu Ser Asp Gly Pro Ile Ala
213                               20                               25                               30
214 Leu Arg Trp Ser Ala Glu Ser Val His Asn Glu Gly Val Ser Ser His
215 35                               40                               45
216 Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Gln Asn Thr Thr
217 50                               55                               60
218 Val Val Lys Gln Asn Glu Thr Ala Leu Leu Asn Glu Trp Arg Thr Asn
219 65                               70                               75                               80
220 Leu Glu Glu Gly Ile Tyr Ser Ala Asp Tyr Lys Asn Pro Tyr Tyr Asp
221                               85                               90                               95

```

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```

222 Asn Ser Thr Phe Ala Ser His Phe Tyr Asp Pro Asp Ser Glu Lys Thr
223          100          105          110
224 Tyr Ile Pro Phe Ala Lys Gln Ala Lys Gln Thr Gly Ala Lys Tyr Phe
225          115          120          125
226 Lys Leu Ala Gly Glu Ala Tyr Gln Asn Lys Asp Leu Lys Asn Ala Phe
227          130          135          140
228 Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val Asn Gln Pro
229 145          150          155          160
230 Met His Ala Ala Asn Phe Thr Asn Ile Ser His Pro Phe Gly Phe His
231          165          170          175
232 Ser Lys Tyr Glu Asn Phe Val Asp Thr Val Lys Asp Asn Tyr Arg Val
233          180          185          190
234 Thr Asp Gly Asp Gly Tyr Trp Asn Trp Lys Ser Ala Asn Pro Glu Glu
235          195          200          205
236 Trp Val His Ala Ser Ala Ser Ala Ala Lys Ala Asp Phe Pro Ser Ile
237          210          215          220
238 Val Asn Asp Asn Thr Lys Ser Trp Phe Leu Lys Ala Ala Val Ser Gln
239 225          230          235          240
240 Asp Ser Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Val Thr Gly Lys
241          245          250          255
242 Arg Leu Met Glu Ala Gln Arg Ile Thr Ala Gly Tyr Ile His Leu Trp
243          260          265          270
244 Phe Asp Thr Tyr Val Asn Asn Lys
245          275          280

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247 <210> SEQ ID NO: 7

248 <211> LENGTH: 963

249 <212> TYPE: DNA

250 <213> ORGANISM: Unknown

252 <220> FEATURE:

253 <223> OTHER INFORMATION: Obtained from an environmental sample.

255 <400> SEQUENCE: 7

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256 gtgattactt tgataaaaaa atgtttatta gtattgacga tgactctatt gttaggggtt      60
257 ttcgtaccgc tgcagccatc acatgctact gaaaattatc caaatgattt taaactgttg      120
258 caacataatg tatttttatt gcctgaatca gtttcttatt ggggtcagga cgaacgtgca      180
259 gattatatga gtaatgcaga ttacttcaag ggacatgatg ctctgctctt aaatgagctt      240
260 tttgacaatg gaaattcgaa catgctgcta atgaacttat ccacggaata tccatatcaa      300
261 acgccagtgc ttggccgttc gatgagtgga tgggatgaaa ctagaggaag ctattctaata      360
262 tttgtaccgc aagatggcgg tgtagcaatt atcagtaaat ggccaatcgt ggagaaaata      420
263 cagcatgttt acgcgaatgg ttgcggtgca gactattatg caaataaagg atttgtttat      480
264 gcaaaagtac aaaaagggga taaattctat catcttatca gcactcatgc tcaagccgaa      540
265 gatactgggt gtgatcggg tgaaggagca gaaattcgtc attcacagtt tcaagaaatc      600
266 aacgacttta ttaaaaataa aaacattccg aaagatgaag tggatatttat tgggtggtgac      660
267 tttaatgtga tgaagagtga cacaacagag tacaatagca tggtatcaac attaaatgtc      720
268 aatgcgccta ccgaatatatt agggcatagc tctacttggg acccagaaac gaacagcatt      780
269 acaggttaca attaccctga ttatgcgcca cagcathtag attatatatt tgtggaaaaa      840
270 gatcataaac aaccaagttc atgggtaaat gaaacgatta ctccgaagtc tccaacttgg      900
271 aaggcaatct atgagtataa tgattattcc gatcactatc ctgttaaagc atacgtaaaa      960
272 taa

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274 <210> SEQ ID NO: 8

VERIFICATION SUMMARY

DATE: 01/30/2006

PATENT APPLICATION: US/10/511,875

TIME: 14:58:07

Input Set : E:\56446-20042.01 - Seqlist (Client).txt

Output Set: N:\CRF4\01302006\J511875.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:58 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:61 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2
L:132 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:135 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
L:206 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:209 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:282 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:285 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8
L:362 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:365 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:798 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:801 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20
L:902 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:905 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22
L:1374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:1377 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:32
L:1650 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:1653 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:38
L:2238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2241 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:50
L:2818 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2821 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:62
L:2916 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2919 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:64
L:3753 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:3756 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:80
L:3872 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:3875 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82
L:3977 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:3980 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84
L:4233 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:4236 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:90
L:4415 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:4418 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:94
L:4584 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:4587 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:98
L:4988 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:4991 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:106